

BRIEFER ARTICLES.

Erythræa Pringleana Wittr. nov. spec.—Planta annua, subparva, 8–21 cm. alta, paullulum ramosa, glabra; foliis omnibus brevioribus quam internodiis; foliis infimis non rosulatis, ovatis apice acutato, brevissime pedunculatis, minimis, 2–3 mm. longis; foliis inferioribus lanceolatis, 3–6 mm. longis; foliis mediis et superioribus lineari-subulatis, 6–15 mm. longis; floribus longe pedunculatis, pedunculis plerumque longioribus quam floribus; sepalis eadem fere longitudine vel paullo longioribus quam tubo corollæ; hoc tertia fere parte brevior quam laciniis limbi; his 7–10 mm. (plerumque 8 mm.) longis, ovatis apice paullulum crenulato; corolla emarcida laciniis limbi contortis persistente, fructus includente; antheris staminum brevioribus quam filamentis; germine eadem fere longitudine vel paullo longiore quam stylo stigmatæque.

Mexico: in collibus prope Guadalajara 18⁵/₁₂88 legit cl. *C. G. Pringle*, (no. 2595).

Haud impossibile mihi videtur hanc speciem cum *Erythræa tenuifolia* Martens et Galeotti, anno 1844, ad exemplaria prope Guadalajara lecta, manco in modo descripta, identicam esse. Nomen specificum “tenuifolia” tamen secundum legem prioritatis non est retinendum, quia cl. *Grisebach* *Erythræam* alteram (e Hungaria et Gallia) jam anno 1839 sub hoc nomine descripsit.—VEIT WITTRÖCK, *Stockholmia* mense Januarii 1891.

[It may be well enough to state in this connection that what was distributed as “*Microcala* n. sp.” (no. 2598) is *Schultesia Mexicana* Watson, n. sp., soon to be published.—C. G. PRINGLE.]

New species of Montana fungi (with plate X).—The illustrations of two new species of Montana fungi described last month, p. 47, were received after the number was in press. At the authors' request they are now published with the accompanying

EXPLANATION OF PLATE X.—*Sporidesmium sorisporioides* Ellis & Anders. 8, fungus about natural size on dead wood of *Populus tremuloides*; 9, small mass of spores superimposed on the hyaline, semiamorphous mycelium, from the swelling up and internal division of the elongate ends of which the spore-masses are developed; 10, two mature spore-masses, *A* having become quite free from the mycelium.

Aecidium Liatridis Ellis & Anders. 11, portion of leaf of *Liatris punctata* about natural size showing a patch of the fungus; 12, a small patch considerably magnified; 13, a perfect tube (cup) more highly magnified. At *A* is shown a cup that has gradually broken down to almost the surface of leaf; 14, four spores; 15, several cells of host

tissue showing the mycelial threads of the aecidium which permeate the leaf tissue in all parts of the affected spots; 16, a few of the pseudoperidial cells highly magnified to show their true shape.

EDITORIAL.

ONE OF THE hard questions that working botanists are called upon to answer, especially those who are also concerned in training botanists, is "what original work shall I do?" The background of the question usually contains no literature and no appliances other than a few standard botanical works and a microscope. There seems to be a widespread notion that when one comes into the possession of a compound microscope he is equipped for "original work." The lack of literature and collections precludes the recommendation of any systematic work. The general lack of knowledge as to the ease with which certain important physiological phenomena can be observed, usually excludes any such answer to the question. Besides, the applicant for "original work" expects that it will involve doing something with his microscope. Nine times out of ten the advice will be given to study the minute anatomy of some plant, as the easiest thing to do. Naturally this is the expected advice, and sectioning and drawing begin at once. But the proper study of the minute anatomy of any plant is far from being "the easiest thing to do," and to recommend any such study to one who has not been thoroughly trained by a competent instructor, is to make a great blunder.

IN THE first place, the ability to correctly interpret is not in the possession of any tyro who can cut a section or focus a microscope. There are more optical illusions due to the microscope than to anything else, and it is chiefly these illusions that will be drawn and reported when difficult, and hence interesting, structures are being investigated by an untrained observer. The unrecognized hiatuses in what appears in the field of the microscope may be small enough when measured by the metric system, but they may be of infinite importance in the interpretation of structures. Such work can only be done by the most careful and reiterated labor of a trained observer. Of course all this only applies to cases where publication is contemplated, for any amount of valuable information may be obtained in a very pleasant way by any one who is doing such work merely for his own edification. But when work rises to the dignity of being called "original investigation," it is proper that it be hedged about by a full knowledge of its real difficulties.